STAT

STAT

PROBLEMS IN DETERMINING GROSS OUTPUT OF USSR MACHINE-BUILDING PLANTS

Vestnik Statistiki, No 5
Moscow, Sep-Oct 1953

In addition to its basic element -- the cost of finished products manufactured during a given accounting period -- the gross output of industrial enterprises also includes the cost of completed industrial operations and the cost of processed semifinished products, less the cost of semifinished products produced at the plant and sent to other enterprises for further processing. In the case of machine-building enterprises, enterprises manufacturing metal shapes, and repair plants, the gross output also includes the value of the increase (or decrease) of uncompleted production.

To obtain reliable data on gross production, it is very important to determine the correct cost of the change in the balance of uncompleted production, since this is one of the elements constituting the gross output of machine-building plants. According to Soviet statistics, the gross output of industrial enterprises is determined on the basis of a single, scientifically founded system applicable to all enterprises. In statistics, the economic content of the gross-production index as a whole as well as of each of its component elements is defined exactly and a definite accounting procedure for it is established. This also applies to the cost of the change in the balance of uncompleted production. On the basis of this single system, individual machine-building enterprises are able to use different practical methods, suited to their particular production setup, to determine the cost of the change in the balance of uncompleted production.

In his article in Vestnik Statistiki, No 3, 1953, Edel'gauz notes correctly that the basic method of determining the change in the uncompleted production balance must consist of a direct estimate, based on an inventory of the whole uncompleted output. However, in a number of enterprises, especially in those engaged in small series production or operating on the basis of individual orders, such inventories are taken irregularly. As a result, on the first day of the month following the accounting month, many enterprises which must report the fulfillment of their production plans are not as yet in possession of the final data on the cost of the change in the balance of uncompleted production, and must use various methods based on operational accounting data to determine their gross output.

The purpose of this article is to examine the methods used by machine-building plants in determining the volume of gross production in the absence of inventory data on uncompleted output, and to show which of these methods is the most efficient. All figures used in the following calculations are hypothetical and do not apply to any specific plants.

In some plants the volume of gross output is determined on the basis of accounting data by an average estimate of the cost of norm-hours worked in the shops during a given period of a month. An estimate of the volume of gross output, by calculating the cost per norm-hour, is made on the basis of data for a number of preceding months. For example, if it has been established that during the past three months one norm-hour of work amounted to 10 rubles of gross output, the number of norm-hours worked in the shops during the preceding accounting month is multiplied by 10 to obtain the volume of gross output. This is such a rough estimate that even in the case of homogeneous series production, where the nature of output does not vary substantially from month to month, the results of determining the volume of gross output are usually unsat-

STAT

Individual plants, which have a proportionately large number of preliminary processing (zagotovitel'nyye) shops, determine the volume of gross output according to operational accounting data based on the estimated change in the balance of semifinished products. For this purpose, the output (in tons) is calculated for the accounting month for each of the preliminary processing shops, i.e., steel shape foundry, cast iron foundry, forge shop, pressing shop, etc. In addition, the amounts of semifinished products used during the accounting month for the manufacture of commodity output are determined, with the exception of those semifinished products sold outside the plant.

The difference between these figures shows the increase or decrease in the balance of semifinished products, in terms of tons. When this has been determined, an estimate of the balance of semifinished products is made, based on the average cost per ton of castings, forgings, etc. The change in the cost of the balance of semifinished products of the plant's own production is considered as the change in the cost of the balance of all uncompleted production at the plant.

Such a method of determining the change (increase or decrease) in the cost of the balance of uncompleted production is complicated and not precise, and as a result, the volume of gross output which is subsequently determined on the basis of bookkeeping data, usually differs considerably from the calculations based on operational accounting data.

The shortcomings in the above-mentioned methods stem from the fact that in both cases the volume of gross output is determined on the basis of data which apply only to a small portion of production expenditures.

A more precise determination of gross production on the basis of operational data can be achieved by computing all expenditures for the production of the gross output. This is done as follows: on the basis of bookkeeping data, the average production cost per ton of semifinished product for each preliminary processing shop is determined for the past three months, as well as the cost of one machine-hour and one norm-hour (for manual work) in each machining and assembly shop; a rough estimate is also made of expenditures for materials, purchased semifinished products, tools, etc. All these data are combined in a table and totaled. Table one is an example of such a computation for one plant.

The total of 14,645,000 rubles represents the amount of all anticipated production expenditures for November, which applies both to the commodity output and to the change (increase or decrease) in the balance of unfinished products and tools.

Since gross-production expenditures in the accounting month are determined on the basis of net production cost, it is necessary in determining the gross output in wholesale prices for the accounting month to multiply total expenditures by a coefficient representing the relation of the cost of commodity output in wholesale prices for the past three months to the net cost of the commodity output for the same period.

For example, assuming that the commodity output for the period August-October in wholesale prices of the enterprise amounted to 45 million rubles, and that the net cost of this output equaled 43 million rubles, the gross output in wholesale prices of the enterprise for the month of November would equal:

$$\frac{14,645 \times 45,000}{43,000} = 15,326,000 \text{ rubles.}$$

STAT

This computation of the volume of gross output, which is made on the first day of the month following the accounting month, is sufficiently exact in the case of an enterprise operating on the basis of series production. However, in the production of small series or individual orders, the volume of gross output, computed by this method, usually differs from the final bookkeeping figures by several percent.

The discrepancy between operational accounting data and bookkeeping data can be explained as follows: (a) Owing to the change in the structure of commodity output during individual months the production cost of semifinished products or the cost of one machine-hour may differ considerably from the average data for the preceding months. (b) The transformation of expenditures for production costs into gross output in terms of wholesale prices, with the use of the above-mentioned coefficient, also produces a result which is not exact, especially in small series or individual order production, where the volume of commodity output and the increase in uncompleted production differ considerably for individual groups of products during individual months.

Table I.

Computation of Anticipated Production Expenditures for November

Name of Shop	Name of Product	Unit of Measurement	Quantity	Cost Per Unit in Rubles	Total Cost in Thousand Rubles
Steel foundry	Open-hearth ingots	tons	800	1,000	800
	Electric furnace ingots	"	100	1,400	140
	Shaped castings of open-hearth furnaces	"	700	5,000	3,500
	Shaped castings of electric furnaces	"	300	6,000	1,800
Cast iron foundry	Iron castings	"	350	1,800	630
Bronze foundry	Bronze castings	"	40	11,000	440
Forge shop	Forgings	[redacted]	250	2,500	625
Structural metal shape shop	Structural shapes	"	200	1,700	340
Tool shop	--	Machine-hours	15,000	20	300
" "	--	Norm-hours	8,000	12	96
Pattern shop	--	Machine-hours	12,000	11	132
Machine assembly No 1	--	"	45,000	18	810
" "	--	Norm-hours	15,000	10	150

STAT

Name of Shop	Name of Product	Unit of Measurement	Quantity	Cost Per Unit in Rubles	Total Cost in Thousand Rubles
Machine assembly No 2	--	Machine-hours	60,000	19	1,140
" "	--	Norm-hours	18,000	11	198
Installation shop	--	"	6,000	8	48
--	Basic materials*	Thousand rubles	--	--	500
--	Auxiliary materials*	"	--	--	180
--	Purchased semifinished products*	"	--	--	2,000
--	Purchased tools	"	--	--	150
--	Capital repairs	"	--	--	350
--	Administrative expenses	"	--	--	71
--	Transport and storage expenses	"	--	--	100
Total plant production costs	--		--	--	14,500
Nonproductive expenditures 1 /					145
Total					14,645

*Note: This includes only the cost of basic and auxiliary materials and semifinished products used in the machining shops, i.e., machine assembly shops No 1 and 2, installation shop, tool shop, and pattern shop. The cost of materials used in the preliminary processing shops is included in the cost of semifinished products of the plant's own production.

Some large machine-building plants use the following method to determine the volume of gross output on the basis of operational accounting data. The production expenditures anticipated for the accounting month are determined for each item of the production estimate on the basis of bookkeeping data for the preceding four months, with possible adjustments in expenditures for the accounting month.

Table 2 is an example of the computation of anticipated production expenditures.

STAT

Table 2.

Computation of Anticipated Production Expenditures for November
(in thousand rubles)

Items	Expenditures According to Bookkeeping Data				Anticipated Expenditures for November
	July	August	September	October	
1. Raw and basic materials, excluding waste products	1,500	1,550	1,600	1,580	1,750
Including purchased semifinished products	200	250	340	370	500
2. Auxiliary materials	320	340	300	360	330
3. Equipment	100	110	90	100	100
4. Fuel	900	950	925	1,025	1,040
5. Electric power, steam, gas from outside sources	300	325	315	340	320
6. Wages, basic and supplementary	3,100	3,200	3,100	3,000	3,100
7. Additional payments to workers (bonuses, etc.)	215	220	215	210	215
8. Amortization	650	660	650	672	654
9. Monetary expenditures	500	600	700	600	600
10. Written off to unproductive accounts	-100	-120	-110	-90	-105
11. Expenditures of the future period	+200	+150	-100	-150	+25
12. Other expenditures	20	30	60	42	38
Total expenditures	-	-	-	-	8,567

The anticipated expenditures for auxiliary materials, equipment, electric power, and wages are determined as average figures for the preceding four months. Expenditures for raw materials and basic materials, including purchased semifinished products, are estimated at higher than the average rate, due to the fact that during the accounting month a large quantity of costly semifinished products made of steel alloys were used in the production process. In determining the expenditures for fuel, its increased consumption during the fall period is also taken into consideration. Therefore, the anticipated expenditures are not determined automatically, but on the basis of concrete economic analysis. To conduct such an analysis, there must be constant contact between the planning division and other divisions of the plant which account for the use of materials, semifinished products, electric power, fuel, etc.

The anticipated expenditures computed in this manner are broken down by products, which are in the process of production, in proportion to the wages paid for these products in the accounting month (Table 3).

The accounting of wages paid according to types of products during the accounting month is done on the basis of special "work orders" which are turned over to the bookkeeping office of the plant. These work orders must be turned in during the entire month. A number of machine-building plants have established the procedure that a worker is to turn in his work order at the time he completes a specific job. The worker retains the stub of the order with a notation by the foreman of the OTK (Technical Control Division) that the work has been finished and approved. The order, indicating the number of completed parts, is signed by the inspector and placed in a special box to be found in every sector of a shop. This system makes it possible to obtain sufficiently exact data by the first day of the month on the expenditure of wages for individual products.

The volume of commodity output in terms of production cost is determined for each group of products as the quotient resulting from the division of the commodity output (in wholesale prices) by the coefficient representing the relationship between the cost of commodity output (in wholesale prices) for the preceding three months and the production cost of the commodity output.

[See table on next page.]

Table 3.

Determination of the Volume of Commodity Output for November
(in thousand rubles)

Name of Product or Expenditure	Cost of Balance of Uncompleted Production on 1 Nov	Anticipated Expenditures for November	Commodity Output Cost for November	Cost of Bal of Uncompleted Prod on 1 Dec	Coefficient	Balance of Uncompl Prod in Wholesale Prices on 1 December
Product No 1	1,400	500	1,000	900	1.15	1,035
" No 2	5,200	1,800	2,200	4,800	1.02	4,896
" No 3	5,600	2,200	1,800	6,000	1.05	6,300
" No 4	10,800	3,500	2,300	12,000	0.98	11,760
Services	400	500	450	450	1.0	450
Other expenses	100	[illegible]	50	117	1.0	117
Total	23,500	8,567	7,800	24,267	--	24,558
Balance of uncompleted production on 1 November in wholesale prices	--	--	--	--	--	23,620
Change in the balance of uncompleted production for November	--	--	--	--	--	+ 938
Commodity output for November in wholesale prices of the enterprise	--	--	--	--	--	7,962
Gross output for November in wholesale prices of the enterprise	--	--	--	--	--	8,900

- 7 -

50X1-HUM

STAT

The cost of the balance of uncompleted production at the beginning of the accounting month is based on bookkeeping data. The balance of uncompleted production at the end of the accounting month is obtained after deducting the cost of commodity output from the total cost of the balance of uncompleted production at the beginning of the month and the anticipated expenditures for the accounting month. For example, in the case of product No 1 (see Table 3) the cost of the balance of uncompleted production as of 1 December equals:

$$(1,400 + 500) - 1,000 = 900,000 \text{ rubles.}$$

The anticipated balance of uncompleted production at the end of the accounting month, in wholesale prices of the enterprise, is computed for each group of products by multiplying the cost of the balance of uncompleted production by the appropriate coefficient.

The change (increase or decrease) in the balance of uncompleted production constitutes the difference between the balance of uncompleted production in wholesale prices at the beginning and at the end of the accounting month. In the above cited example this change in the balance of uncompleted production equals:

$$24,558 - 23,620 = +938,000 \text{ rubles.}$$

By adding this amount to the cost of commodity output, we obtain the anticipated gross output for the accounting month. The described method of determining the gross output produces results which deviate from the final bookkeeping data by not more than 1.5 or 2 percent. Such deviations are mainly the result of the fact that the total sum of expenditures for production is distributed among individual products proportionate to the expenditures for wages, which represent only one element in the total expenditures.

Considering the fact that the cost of materials and purchased semifinished products in the estimate of production expenditures at a machine-building plant often amounts to 45 percent or more, this method of computation is not completely accurate. It is necessary to make a more exact distribution of the expenditures for materials among individual groups of products manufactured by the plant.

Because of the shortcomings in the above-described method, individual plants have begun to use a more precise method of computing anticipated material expenditures. The following concrete example will serve to illustrate this method of computing the gross output.

1. The planning division of a plant receives from the division (or group) of the plant administration in charge of cooperative operations a statement indicating the shop, the product involved, and the cost of purchased semifinished products supplied to the shop during the accounting month. Table 4 is given as an example of such a statement.

STAT

2. On the last day of the accounting month the remaining requirements for basic materials allocated to the shops, which have not been distributed among individual orders, are totaled.

Table 4.

Statement on the Cost of Purchased Semifinished Products Issued to the Shops during May

Name of Shop	Name of Product	Amount in Thousand Rubles
Shop A	Product No 1	20
	" No 2	210
	" No 4	25
	" No 6	25
	Total	280
Shop B	Product No 2	170
	" No 3	32
	" No 5	8
	Total	210
Shop C	Product No 3	63
	" No 7	17
	Total	80
Total for all shops		570

The cost of basic materials received by the shops, established in accordance with requirements based on the orders, is stated in Tabe 5, which also includes the totals for each product from Tabe 4.

Table 5.

Statement on the Cost of Basic Materials and Semifinished Products Included in the Production Process during May (By Individual Products)
(in thousand rubles)

Name of Product	Basic Materials	Purchased Semifinished Products	Total
Product No 1	25	20	45
" No 2	162	380	542
" No 3	147	95	242
" No 4	18	25	43

STAT

Name of Product	Basic Materials	Purchased Semifinished Products	Total
Product No 5	93	8	101
" No 6	32	25	57
" No 7	9	17	26
" No 8	37	--	37
Special tools made at the plant	7	--	7
Total	530	570	1,100

3. On the last day of the accounting month, commissions inspect in all shops of the plant the stocks of materials and purchased semifinished products allocated to the shops and not yet processed. Lists of such materials and purchased semifinished products, and their quantity, are turned over to the planning division which, together with the bookkeeping office, prepares an estimate of these materials and semifinished products.

With the aid of data, broken down by groups of products, on materials and semifinished products not subjected to processing at the beginning or end of the accounting month, as well as on materials and semifinished products requisitioned from the warehouse during the accounting month (Table 5), a summary is made on the expenditure of materials and semifinished products during the accounting month, as shown in Table 6.

The expenditures for each group of products and the changes in the cost of the remaining materials and semifinished products, not yet included in the production process, are determined as the cost of all materials to be used in production during the accounting month.

For example, in the case of product No 1 (see Table 6), the expenditure of materials and semifinished products equals:

$$25 + 20 - [10 - (4 + 1)] = 40{,}000 \text{ rubles.}$$

4. Wage expenditures are determined by totaling the figures listed in the "work orders." Shop expenditures and plant overhead expenditures are determined by corresponding norms established in the plan.

The computation of anticipated expenditures for gross output, pertaining to wages and overhead expenditures during the accounting month, is shown in Table 7.

5. The planning division, together with the bookkeeping office, computes the anticipated expenditure of auxiliary materials, industrial fuel, equipment, and depreciation of tools and appliances during the accounting month for all of the manufactured products.

The cost of expended auxiliary materials and equipment not relating to any specific product is distributed among various products in proportion to the wage expenditures, while the cost of fuel is distributed in proportion to the weight of the products.

STAT

Table 6.

Computation of the Expenditure of Basic Materials and Semifinished Products During May, Broken Down by Individual Products
(in thousand rubles)

Name of Product	In Production During Accounting Month		Not Included in Production Beg of Month		Not Included in Production End of Month		Expended for Prod		
	Materials	Semifinished Products	Mat	Semifin Prod	Mat	Semifin Prod	Mat	Semifin Prod	Total
No 1	25.0	20.0	4.0	1.0	10.0	--	19.0	21.0	40.0
No 2	162.0	380.0	36.0	10.0	41.0	18.0	157.0	372.0	529.0
No 3	147.0	95.0	3.0	1.0	45.0	--	140.0	96.0	236.0
No 4	18.0	25.0	2.0	--	2.0	--	18.0	25.0	43.0
No 5	93.0	8.0	22.0	--	24.0	--	91.0	8.0	99.0
No 6	32.0	25.0	10.0	--	8.0	2.0	34.0	23.0	57.0
No 7	9.0	17.0	2.0	--	2.0	--	9.0	17.0	26.0
No 8	37.0	--	5.0	--	5.5	--	36.5	--	36.5
Special plant-made tools	7.0	--	1.0	--	0.5	--	7.5	--	7.5
Total	530.0	570.0	120.0	12.0	138.0	20.0	512.0	562.0	1,074.0

Table 7.

Computation of Anticipated Expenditures for Gross Production, Pertaining to Wages and Overhead Expenditures During May
(in thousand rubles)

Name of Product	Basic Wages	Bonuses	Supplementary Wages	Shop Overhead Expenditures	Plant Overhead Expenditures	Tests and Other Expenditures	Total
No 1	2.4	--	0.6	9.2	3.8	--	16.0
No 2	38.0	15.1	12.4	144.6	58.0	79.9	348.0
No 3	65.0	1.0	0.5	242.5	100.0	--	409.0
No 4	8.2	0.5	0.6	31.2	12.5	--	53.0
No 5	49.5	3.5	0.9	186.4	78.2	--	318.5
No 6	11.4	2.0	1.0	43.8	17.8	--	76.0
No 7	1.7	0.9	--	6.6	2.7	--	11.9
No 8	13.0	--	5.5	50.3	20.5	--	89.3
Special plant-made tools	1.4	--	--	3.4	1.5	--	6.3
Total	190.6	23.0	21.5	718.0	295.0	79.9	1,328.0

STAT

Information on the expenditure of auxiliary materials, industrial fuel, and equipment is included in Table 8.

Table 8.

Information on the Expenditure of Auxiliary Materials, Industrial Fuel and Equipment, During May
(in thousand rubles)

Name of Product	Auxiliary Materials and Industrial Fuel	Equipment
No 1	[illegible]	--
No 2	36.0	27.0
No 3	30.0	5.0
No 4	3.0	1.0
No 5	2.0	0.5
No 6	22.0	16.0
No 7	1.6	0.5
No 8	3.2	1.0
Special tools made at the plant	0.2	--
Total	102.0	50.0

6. The data on the amount of all production expenditures, i.e., expenditures for basic materials, semifinished products (Table 6), anticipated wages and overhead expenditures (Table 7) and the cost of auxiliary materials, industrial fuel, and equipment (Table 8) are entered in the summarized table of production expenditures (Table 9).

Table 9.

Summarized Information on Production Expenditures during May
(in thousand rubles)

Name of Product	Basic Materials & Semifin Products	Wages, Overhead & Other Expenditures	Auxiliary Materials & Industrial fuel	Equipment	Total Expenditures
No 1	40.0	16.0	4.0	--	60.0
No 2	529.0	348.0	36.0	27.0	940.0
No 3	236.0	409.0	30.0	5.0	680.0
No 4	43.0	53.0	3.0	1.0	100.0
No 5	99.0	318.5	2.0	0.5	420.0

STAT

Name of Product	Basic Materials & Semifin Products	Wages, Overhead & Other Expenditures	Auxiliary Materials & Industrial fuel	Equipment	Total Expenditures
No 6	57.0	76.0	22.0	15.0	170.0
No 7	26.0	11.9	1.6	0.5	40.0
No 8	36.5	89.3	3.2	1.0	130.0
Special tools made at the plant	7.5	6.3	0.2	--	14.0
Total	1,074.0	1,328.0	102.0	50.0	2,554.0

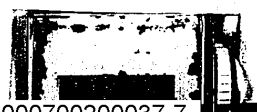
7. On the basis of the data obtained, a computation of the anticipated change in the balance of uncompleted production for the accounting month is made, as shown in Table 10.

Table 10.

Computation of Anticipated Change in the Balance of Uncompleted Production in Current Wholesale Prices of the Enterprise for May (in thousand rubles)

Name of Product	Planned Commodity Output for May in Wholesale Prices	Actual Commodity Output for May in Current Wholesale Prices	Balance of Uncompleted Product on 1 May		Anticipated Prod Expenditures for May	Anticipated Prod Costs of Commodity Output	Anticipated Bal of Uncompletcd Production as of 1 June (prod cost)	Coefficient	Anticipated Bal of Uncompl Prod as of 1 June (in whole-sale prices)
			Net Cost	Wholesale Prices					
No 1	--	--	749.3	770.1	60	--	809.3	1.03	833.6
No 2	1,000	1,050	2,150.2	2,200.0	940	1,000	2,090.2	1.05	2,194.7
No 3	520	500	1,160.5	1,220.6	680	470	1,370.5	1.06	1,452.7
No 4	--	--	971.0	990.0	100	--	1,071.0	1.02	1,092.4
No 5	470	475	1,300.0	1,330.5	420	460	1,260.0	1.00	1,260.0
No 6	145	150	312.0	343.0	170	135	347.0	1.01	350.5
No 7	25	25	70.0	56.0	40	31	79.0	0.80	63.2
No 8	105	110	644.6	640.5	130	108	666.6	1.00	666.6
Special tools made at the plant	15	10	23.4	23.0	14	11	26.4	0.91	24.0
Various services	--	--	117.0	122.3	--	--	117.0	1.05	122.9
Total	2,280	2,320	7,498.0	7,696.0	2,554	2,215	7,837.0	--	8,060.6

50X1-HUM



The second column of the above table indicates the commodity output according to the plan established for the plant by a higher organization. The actual commodity output is determined on the basis of data supplied by the OTK and the warehouse for finished products. The balance of uncompleted production at the beginning of the accounting month is established with the aid of bookkeeping data. Anticipated production expenditures for the accounting month are taken from Table 9. The anticipated cost of commodity output is obtained by dividing the cost of commodity output for each product in wholesale prices by the appropriate coefficient, with an adjustment to cover the deviation from the average data due to changes in the design of products, development of new products, or other reasons. The indicated coefficient is computed as the relationship between the cost of the commodity output of the enterprise in current wholesale prices and the cost of the same products during the preceding three months.

The anticipated net cost of the balance of uncompleted production at the end of the accounting month is determined by adding the cost of the balance of uncompleted production at the beginning of the month to the anticipated production expenditures and subtracting the anticipated cost of the commodity output. For example, in the case of product No 6, the anticipated balance of uncompleted production equals:

312 + 170 - 135 = 347,000 rubles.

The anticipated balance in wholesale prices of uncompleted production at the end of the accounting month is determined by multiplying the total net cost of the anticipated balance of uncompleted production by a coefficient representing the relationship between the cost of commodity output in wholesale prices for the preceding three months and its net cost.

After the total anticipated balance of uncompleted production has been established in wholesale prices for the end of the month, it is possible to compute the anticipated gross output for the accounting month. This figure will equal the commodity output in wholesale prices plus the change in the balance of uncompleted production for the accounting month in wholesale prices.

It should be borne in mind that the cost of commodity output and the cost of the balance of uncompleted production is determined in the current wholesale prices of a particular enterprise while the cost of the gross output is determined in wholesale prices effective as of 1 January 1952. Assuming that in the case of product No 2 the prices dropped 10 percent since 1 January 1952, and that in the case of all other products the prices remained unchanged, the commodity output in prices of 1 January 1952 would be higher than in current prices and it would be computed as follows for the accounting month:

2,320 + 1,050 x 0.11 = 2,435,000 rubles.

On 1 May, the balance of uncompleted production in wholesale prices effective as of 1 January 1952 for product No 2 is 2,200,000 rubles x 1.11 = 2,442,000 rubles; and on 1 June it is 2,194,700 rubles x 1.11 = 2,436,000 rubles.

The anticipated gross output in this case would equal:
2,435.0 + [(8,060.6 + 241.4) - (7,696.0 + 242.0)] =2,799,000 rubles.

STAT

A large number of administrative divisions of the plant participate in determining production expenditures. They are assisted by special shop commissions which determine the stocks of materials and purchased semifinished products received by the shops and not yet put into production. In this way it is possible to make a speedy computation, i.e., by the first of the following month, of the volume of gross output in the accounting month. If the plant has a machine-accounting station, this work can be simplified even more.

The above-described method of determining the volume of gross output on the basis of operational accounting data is the most practical of all methods discussed. However, even with this method the results may differ to some extent from the final data obtained on the basis of bookkeeping data.

It has become extremely necessary to establish a uniform system for computing the cost of uncompleted production at machine-building plants and for determining the gross output on the basis of operational accounting data.

STAT

- E N D -